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10/050,385	01/16/2002	Brian John Cragun	ROC920010255US1	6187

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EXAMINER

KANG, ROBERT N

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/050,385	Applicant(s) CRAGUN ET AL.	
	Examiner Robert N. Kang	Art Unit 2625	<i>RNK</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,4-15,17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Response to Arguments

1. Applicant's arguments filed 2/14/2006 have been fully considered but they are not persuasive.
2. Regarding item IIA, the examiner made a typographical error on the PTO-892, writing "Microsoft Word 2002 Help File" instead of "Microsoft Word 2000 Help File." Examiner apologizes for this mistake and has included the documents as well as the copyright screen of the software with which the help file was bundled. Obviously, software copyrighted and released in 1999 qualifies as prior art. Examiner again apologizes for this error and any confusion or inconvenience it has caused the applicant.
3. Regarding item III, the applicant's inclusion of two books by reference does not address the concern the examiner cited with the particular invention, not OCR technology in general. The invention as disclosed states on page 8, line 20, "anything not identifiable by the OCR system as a typewritten character would be classified as a handwritten notation." This approach leaves the invention vulnerable to two types of errors:
 - I.) Handwritten notations which are recognizable by the OCR system is classified as typewritten, and therefore incorrectly classified.
 - II.) Figures and images, which are unrecognizable as text, will be classified as handwritten annotations.

The inclusion by reference of the two books on OCR does not provide illumination on the threshold of OCR settings and the accuracy of differentiating between recognizable handwritten text and typewritten text. Applicant is required to give specific evidence to ensure that the specification is enabling instead of including a plethora of material "by reference." Traversal is denied.

4. Regarding Item IA and its associated amended limitation, it is obvious to the examiner that, when a check is scanned and typewritten text is removed in Graf, if there is no handwriting information, it is not saved to the database, and thus, not printed or printable. Furthermore, Graf's invention, while not specifically disclosing the condition that there is no handwriting on a check, takes for granted that some individuals would believe it is a novel feature not to print out handwriting if there is no handwriting to be printed. Again, the examiner contends this is inherent to the invention. Traversal is denied and claims 1, 12, 13, 20, 3-11, 15-18 remain rejected.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Signals and signal bearing media are nonstatutory under the new 101 guidelines.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 12, 13, 20 rejected under 35 U.S.C. 102(b) as being anticipated by Graf (US-PAT 5,631,984).

In regards to claim 1, Graf discloses a method which scans and compresses a check or other document after isolating the dynamic elements from the preprinted check. Graf states in column 3, lines 65-68, "the term 'document' as used herein therefore includes not only paper documents such as forms, financial instruments, and the like, but more generally any type of information which may be stored or processed in the form of an electronic image." Regarding the first step of the method, "capturing a first image of a first paper document," Graf discloses in column 5, lines 4-8, "the check 10 may be scanned, utilized a scanner 35, in a matter well known in the art, to produce an original full check image 40 which includes the static and dynamic portions identified above." Graf defines the dynamic portion of the document in column 4, line 9, stating, "a dynamic portion, such as added handwritten text, is a portion which may be distinct from document to document." Thus the dynamic portion qualifies as a handwritten notation. Finally, Graf discloses in column 5, lines 54-55, "the handwritten dynamic portion of the original check image 40 is identified and then isolated from the preprinted static portion." Thus Graf's patented method meets the requirements for the second

step of the pending method, "detecting whether the first image contains a handwritten notation."

Regarding claim 13, "a copying apparatus for documents ... comprising a scanner...[and] a processor configured to determine whether the image of the first document contains a handwritten notation," Graf's claims in claim 15, "an apparatus for use in a document image processing system." A copying apparatus or photocopier falls under the category of image processing apparatuses, and thus is anticipated by the Graf patent. Additionally, Graf discloses in claim 15, line 40, "a means for receiving a first electronic image of a substantially complete document." In regards to receiving an image of the document, Graf states in column 5, lines 4-8, "the check 10 may be scanned, utilized a scanner 35, in a matter well known in the art, to produce an original full check image 40 which includes the static and dynamic portions identified above." Therefore Graf's invention possesses "a scanner for capturing an image of a first document." Finally, Graf describes in claim 15, line 44, a "means for identifying a portion of the first electronic image which corresponds to a portion of the added information." The 'added information' refers to the "handwritten dynamic portion" disclosed in column 5, lines 54-55, whereas, broadly defined, the identifying means encompasses the processor claimed in claim 13, line 4. Because the processor as disclosed by the applicant and the "identifying means" as disclosed by Graf carry out the same function of identifying the presence of handwritten information, claim 13, limitation 2, "a processor configured to determine whether the image of the first document contains a handwritten notation," is expressly anticipated by Graf.

In regards to claim 20, a "computer program configured to perform" the method as disclosed in claim 1, because the method is anticipated by Graf, the software containing said method would also be unpatentable over Graf.

Regarding claim 12, "wherein detecting whether the first image contains handwritten notations comprises detecting color differences in the image," Graf discloses in figures 4 and 5 a method of extracting the handwritten portions by various image transforms to determine a color spectrum range of the handwritten text, as shown in step 500. By filtering out image components outside the color spectrum range in step 502, the handwritten ink can be detected and extracted. Graf further states in column 9, lines 7-11, "since the name and address are typically printed with the same ink, their color will show up in the histogram as a prominent peak. The image data can then be thresholded to make only this color visible and thereby extract the printed text." Since extracting the handwritten text occurs simultaneously with an accurate detection of the text, and the extraction is based upon color differences in the first image, Graf's patented system anticipates the method as disclosed in claim 12.

Claim Rejections - 35 USC § 103

8. Claims 8, 9, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Gonzales (reference U).

As stated earlier in this action, Graf discloses a method which scans and compresses a check or other document after isolating the dynamic elements from the preprinted check. Graf states in column 3, lines 65-68, "the term 'document' as used

herein therefore includes not only paper documents such as forms, financial instruments, and the like, but more generally any type of information which may be stored or processed in the form of an electronic image." Regarding the first step of the method, "capturing a first image of a first paper document," Graf discloses in column 5, lines 4-8, "the check 10 may be scanned, utilized a scanner 35, in a matter well known in the art, to produce an original full check image 40 which includes the static and dynamic portions identified above." Graf defines the dynamic portion of the document in column 4, line 9, stating, "a dynamic portion, such as added handwritten text, is a portion which may be distinct from document to document." Thus the dynamic portion qualifies as a handwritten notation. Finally, Graf discloses in column 5, lines 54-55, "the handwritten dynamic portion of the original check image 40 is identified and then isolated from the preprinted static portion." Thus Graf's patented method meets the requirements for the second step of the pending method, "detecting whether the first image contains a handwritten notation." Therefore the limitations of the independent claim 1 are met.

Graf does not expressly disclose a method of determining whether a document has handwritten notations by receiving two copies of the same original document after handwritten notations have or have not been added by comparing the two images.

Gonzales on page 465, paragraph 4, states "one of the simplest approaches for detecting changes between two image frames $f(x, y, T_i)$ and $f(x, y, T_j)$ taken at times T_i and T_j , respectively, is to compare the two images pixel by pixel. One procedure for

doing this is to form a difference image. A difference image between two images take at times T_i and T_j maybe defined as

$$d_{ij}(x, y) = 1 \quad \text{if } |f(x, y, T_j) - f(x, y, T_i)| > \text{Threshold}$$

$$d_{ij}(x, y) = 0 \quad \text{otherwise"}$$

Graf and Gonzales are combinable because they are both from the field of image processing and image transforms. Furthermore, the techniques cited in Gonzales are extremely elementary relative to the processes as disclosed by Graf.

Therefore, it would have been obvious at the time of invention to one of ordinary skill in the art to integrate in Graf a method of receiving a second image and comparing it to the first through subtraction to determine any changes in the images as taught by Gonzales. Claims 8 and 11 are inherently met by this modification for the following reasons: 1.) In order to have a second image for comparison, another copy of the document with or without additional markings must be received. Since Graf discloses a scanning operation to capture the first image, it follows that Graf would utilize the same scanning operation when scanning a separate physical sheet of paper, thereby meeting the requirements of claim 8. 2.) To compare an image pixel by pixel as taught by Gonzales, image data must be retained in order to perform the necessary subtraction. For image data to be maintained, the intensity values for each pixel must be stored in either a location in physical memory or within registers within a processor cache. In either case, this comprises "storing the first [or second] copy of the first image in a storage device." Thus the entire process in claim 11 is unpatentable over the

Graf/Gonzales combination. Therefore, the apparatus claim 18 is met as well, since it follows that the processor carries out the instructions as recited by the method claim.

The motivation for this modification would be to reduce the possibility of incorrectly designating an image or non-OCR readable document object present in both sheets as handwritten notations.

Thus it would have been obvious at the time of invention to combine Graf with Gonzales to achieve the invention disclosed in claims 8, 9, 11, and 18.

9. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Jinnai (US-PAT 5,982,502).

As stated earlier, Graf's patented invention meets the requirements stated in claim 1. Graf discloses a method which scans and compresses a check or other document after isolating the dynamic elements from the preprinted check. Graf states in column 3, lines 65-68, "the term 'document' as used herein therefore includes not only paper documents such as forms, financial instruments, and the like, but more generally any type of information which may be stored or processed in the form of an electronic image." Regarding the first step of the method, "capturing a first image of a first paper document," Graf discloses in column 5, lines 4-8, "the check 10 may be scanned, utilized a scanner 35, in a matter well known in the art, to produce an original full check image 40 which includes the static and dynamic portions identified above." Graf defines the dynamic portion of the document in column 4, line 9, stating, "a dynamic portion, such as added handwritten text, is a portion which may be distinct from

document to document.” Thus the dynamic portion qualifies as a handwritten notation. Finally, Graf discloses in column 5, lines 54-55, “the handwritten dynamic portion of the original check image 40 is identified and then isolated from the preprinted static portion.” Thus Graf’s patented method meets the requirements for the second step of the pending method, “detecting whether the first image contains a handwritten notation.”

Graf does not expressly disclose a method step for printing the first image based on the results of a positive identification of handwritten notations.

Jinnai discloses in figure 4 a marking page which is scanned and searched for markings through the reader unit 1 in step 7 of figure 6. The handwritten marks, shown in figure 4, determine the image processing to be performed by the core unit 10 before printing from the printer unit 2. Specifically, form E6 allows the user to specify the number of copies sent to the printer unit. Broadly defined in the context of a fax apparatus, this qualifies as a page number. Jinnai states in column 5, lines 55-58, “reference character E6 indicates a marking area for designating the number of image files to be outputted.” Therefore, the first page is printed if and only if a mark is detected by the image processor in the E6 field of the marking sheet depicted in figure 4.

Graf and Jinnai are combinable because they are both from the field of image processing and printing.

Therefore it would have been obvious to include in Graf’s handwriting notation detection system a method step of printing the first image in the document if and only if the system detects a handwritten mark as taught by Jinnai.

The motivation behind this modification would be to automatically print out scanned pages which have been edited by hand by a user.

Therefore it would have been obvious to combine Graf and Jinnai to obtain the invention disclosed in claims 3 and 16.

10. Claims 4, 5, 6, 7, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Jinnai (US-PAT 5,982,502) further in view of Microsoft Corporation Word version 10 (otherwise known as Word 2002).

The Graf/Jinnai combination, which automatically prints out a given page if a handwritten mark is detected in an image file, is thoroughly described in the above rejection and thus not restated for the dependent claims 4 and 7.

With regards to claims 4, 5, and 6, the Graf/Jinnai combination does not expressly "generate location information for the handwritten notation" as disclosed by claim 4, consequently it does not "print the location information" as disclosed by claim 5, and finally the invention does not "store the location information in memory," as disclosed by claim 6.

Microsoft Corporation's word processing application, Word 2002, also known as Word version 10, was released in 2001. A brief summary of the history and features of the Microsoft Word application can be found at www.wikipedia.org. As shown in reference V, Microsoft discloses a method of tracking changes to a document by "using revision marks, the equivalent of 'redlining' or 'blacklining' in the legal profession, to

indicate tracked changes,” as disclosed in paragraph 2. These red and black lines, broadly defined, qualify as “location information” because they mark the specific location in a document where changes have occurred. Printing the document while under the change tracking mode also prints these red and black lines on the print media, thus “printing the location information.” Furthermore, these red and black lines may be saved with the current version of the document to compare changes to a previous version, thus qualifying as “storing the location information in a memory.”

Graf, Jinnai, and Microsoft Word are combinable because they all deal directly with image and document processing as well as indirectly with image and document printing.

Therefore it would have been obvious at the time of invention to one of normal skill in the art to include in Graf/Jinnai a system of tracking document changes as taught by Microsoft Word, using the aforementioned detected handwritten notations as changes.

The motivation behind this modification would be to allow easy and automatic location and indexing of detected handwritten notations; this method would allow the modification of image files whereas the MS-Word system is only compatible with proprietary DOC or text files.

Therefore it would have been obvious to combine Graf/Jinnai with Microsoft Word to obtain the invention as disclosed in claims 4, 5, and 6.

Regarding claims 7 and 15, the exact Graf/Jinnai/Microsoft combination as disclosed in the above rejection is employed.

Paragraph 2 of reference V shows a "blackline" in the margin of a paragraph of text where changes have been detected. It is denoted by the label "changed line." Microsoft Word, when in change tracking mode, automatically places these blacklines in the margins of paragraphs of changed text; an operation parallel with 'blacklining' in the legal industry. Therefore, this comprises "superimposing a margin mark onto the first image adjacent to the handwritten notation."

Graf, Jinnai, and Microsoft Word are combinable because they all deal directly with image and document processing as well as indirectly with image and document printing.

Therefore it would have been obvious at the time of invention to one of normal skill in the art to include in Graf/Jinnai a system of tracking document changes as taught by Microsoft Word, using the aforementioned detected handwritten notations as changes.

The motivation behind this modification would be to allow easy and automatic location and indexing of detected handwritten notations; this method would allow the modification of image files whereas the MS-Word system is only compatible with proprietary DOC or text files.

Therefore it would have been obvious to combine Graf/Jinnai with Microsoft Word to obtain the invention as disclosed in claims 7 and 15.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Microsoft Corporation Word version 10 (otherwise known as Word 2002).

Graf discloses an apparatus which meets the requirement of independent claim 13, as earlier stated in this office action. Graf's patented apparatus does not expressly state that the "processor is configured to generate notation summary information for the document."

Paragraph 3 of the Microsoft Help document V states "when a comment is added word numbers it and records it in a separate comment pane... word tracks each reviewer's comment reference marks in a distinct color." Broadly defined, the numbering and coloring of each comment qualifies as "a notation summary" which is generated by the word processing application, which in turn uses the central processor of the host PC.

Graf and Microsoft Word are combinable because they deal directly with image and document processing as well as indirectly with image and document printing.

Therefore it would have been obvious at the time of invention to one of normal skill in the art to include in Graf a system of tracking document changes as taught by Microsoft Word, using the aforementioned detected handwritten notations as changes.

The motivation behind this modification would be to allow referencing and summary of detected handwritten notations; this method would allow the modification of image files whereas the MS-Word system is only compatible with proprietary DOC or text files.

Therefore it would have been obvious to combine Graf with Microsoft Word to obtain the invention as disclosed in claim 17.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Gonzales, further in view of Microsoft Corporation Word version 10 (otherwise known as Word 2002).

Examiner asserts that claim 10 is identical to claim 17 except that it depends on dependent claim 8, which requires two scanning processes for two distinct image copies of a single document. Therefore, the Graf/Gonzales combination is required.

The Graf/Gonzales combination as stated in the rejection for claim 8 meets the requirements of a method which performs two scans and two detections for multiple user edited copies of a single document.

The Graf/Gonzales combination does not expressly state that the "processor is configured to generate notation summary information for the document."

Paragraph 3 of the Microsoft Help document V states "when a comment is added word numbers it and records it in a separate comment pane... word tracks each reviewer's comment reference marks in a distinct color." Broadly defined, the numbering and coloring of each comment qualifies as "a notation summary" which is generated by the word processing application, which in turn uses the central processor of the host PC.

Graf, Gonzales, and Microsoft Word are combinable because they deal directly with image and document processing as well as indirectly with image and document printing.

Therefore it would have been obvious at the time of invention to one of normal skill in the art to include in Graf/Gonzales a system of tracking document changes as taught by Microsoft Word, using the aforementioned detected handwritten notations as changes.

The motivation behind this modification would be to allow referencing and summary of detected handwritten notations; this method would allow the modification of image files whereas the MS-Word system is only compatible with proprietary DOC or text files.

Therefore it would have been obvious to combine the Graf/Gonzales combination with Microsoft Word to obtain the invention as disclosed in claim 10.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US-PAT 5,631,984) in view of Jinnai (US-PAT 5,982,502) further in view of Microsoft Corporation Word version 10 (otherwise known as Word 2002).

Examiner asserts that claim 19 is simply a homologation of previous method and/or apparatus claims. Specifically, limitations (a) and (b) are simply a restatement of claim 10, as is the limitation after (c), "wherein the programmable processor is programmed to detect handwritten comments." Furthermore, the limitation, to "generate notation summary for the page based on the detection," is a restatement of claim 17.

Similarly, the following claim "superimpose a margin mark adjacent to the handwritten comments," is a restatement of claim 15. Finally, the final limitation, "print[ing] the image of the page only if the page includes at least one handwritten comment," is a simple restatement of claim 16.

The examiner contends that the only difference between the collection of apparatus claims [10, 15, 16, 17] and claim 19 are the following limitations: 1.) The apparatus is "a photocopier" and 2.) Said photocopier comprises (c), a printer coupled to the programmable processor.

With regards to these examiner-labeled limitations, Graf in figure 1 discloses a scanner 35, coupled to an image processor 37, finally coupled to a printer 38. This functionally comprises "a photocopier," even though the technology used may have slight variations from the common photocopy machine. Thus limitation 1 is met. Furthermore, the printer 38 is coupled to the image processor 37 in figure 1 as well. Therefore limitation 2, "a printer coupled to the programmable processor," is also met.

Further explanation of this rejection can be found by referencing the individual rejections for claims 10, 15, 16, and 17, wherein the combinations of prior art and the motivations for such combinations has been exhaustively described.

Conclusion

14. Examiner would like to direct the applicant's attention to US-PAT 6,609,805, particularly column 7 line 62 to column 8 line 49. Ma's invention is essentially identical

to the claimed invention; however, because it was discovered by the examiner well after the first non-final rejection, it is not relied upon.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

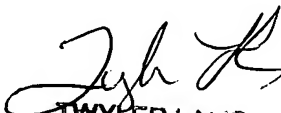
Examiner would like to inform the applicant that art unit 2622 has been re-designated as art unit 2625 due to organizational restructuring with the Patent & Trademark Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert N. Kang whose telephone number is (571) 272-0593. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ^{Twylar Lamb} ~~Edward Coles~~ can be reached on (571)272-⁷⁴⁰⁶~~7402~~. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Robert N. Kang


TWYLER LAMB
PRIMARY EXAMINER
Supervisory Patent Examiner